



Sloan Career Cornerstone Center

Profiles of Chemists



Patrick Dickerson

**Process Technology Engineer
Solutia Inc.
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Education:

B.S. - Chemical Engineering, University of Florida

Job Description:

Process Technology Engineer in Chemical Engineering

Video Transcript 1:

"In my work, I deal with a process where we take what a chemist does they synthesize a small amount of material and then we have to take that and scale it up to making a million pounds a day or however much the company wants out of the process. Then we learn how to separate and get all the impurities out and to purify it to what we want and then it's either used as a final product or used on as a another as what we call a chemical intermediate."

Video Transcript 2:

"With chemical engineering since we're making a large quantity of something we deal with more with heat transfer and fluid flow so we have to learn how things flow and how heat transfers on a large scale with smaller chemical reactions you don't worry about it in a beaker so because the air around you is enough to absorb it but on a larger scale you need to design equipment that will handle it. Usually we will use water to transfer heat because it is a good heat synch we focus on kinetics more."

Video Transcript 3:

"Being a chemical engineer you need to be able to communicate well. You have to have good communication skills - written and oral - and also you have to be technical and analytical. You need to be able to sit down and understand a lot of higher math and things like that so that you can find out what someone else is talking about and then - analytical, just being able to look at data and figure out what's wrong a lot of times - so those are very important."

Video Transcript 4:

"It's always nice to be able to see something that you do that works. You get out there and work with a bunch of people and you make some changes and improve the process and you get to see that in the end; you see the final product coming out and it's better than what you started with and that always makes you feel better."

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Video Transcript 5:

"I also found out that chemical engineering is about the broadest engineering degree that you can get and they are used in just about every company in the world and one of the amazing things is that they actually use them on Wall Street to do math calculations and things to solve problems which is kind of weird you never think chemical engineering would be used in financials so they're used everywhere and I knew that you could get a good salary when you come out and get good jobs, so I stuck with it. It wasn't an easy route, but it pays off when you get out."

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